

REMARKS

Reconsideration and withdrawal of all grounds of rejection are respectfully requested in view of the above amendments and the following remarks.

Claims 1 and 43 were amended to recite that an electrical insulation layer is disposed between and in contact with a dispersion layer (comprising liquid crystal dispersed in polymer) and a first or second conductive layer. The provisional application U.S. Ser. No. 60/598,163 discloses that the display can have no insulation layer, one insulation layer or two insulation layers associated with each dispersion layer and so, supports the claim amendments to claims 1 and 43 in which there can be one insulation layer. See p. 4 of the provisional application, paragraph 4, in which the insulation layer 104 need not be used leaving only one insulation layer between the dispersion layer and one of the electrode conducting layers. Therefore, these claims have a date of invention before Aylward and it is not applicable as a reference against them.

New claims 60-81 are provided in which an electrical insulation layer is not required. For support, see claim 2 of the provisional application which does not recite an insulation layer. Claims 60-81 closely track the claims that were filed with the 60/598,163 application and thus, are supported by that application. Therefore, these claims have a date of invention before Aylward and it is not applicable as a reference as to these claims.

1. Claims 1-56 were rejected under 35 U.S.C. 102(b) as being anticipated by Topelberg (U.S. Pub. No. 2003/0214471).

Arguments similar to those presented in the January 5, 2010 amendment apply with regard to claims 1 and 43 except that the claims feature one electrical insulation layer. This claimed electrical insulation layer is advantageous in that it will prevent shorts between the electrodes across the liquid crystal layer if the liquid crystal layer is not sufficiently insulating. Topelberg does not disclose an electrical insulation layer as claimed positioned between the dispersion layer and one of the conductive layers.

However, Topelberg also is deficient as to all pending claims because it does not disclose a liquid crystal dispersion layer comprising liquid crystal material dispersed in polymer, let alone a layer of bistable cholesteric liquid crystal material (claims 10, 47 and 61). The claimed dispersion layer can be part of a matrix display containing individually controlled pixels, such as when the dispersion layer is sandwiched between row and column electrodes (claims 33, 54 and 81) or an electrode and an active matrix backplane (claims 29 and 80). Topelberg teaches away from matrix displays ("an ultimate solution to obtain dynamically changeable image is the matrix display where each picture element is formed of a plurality of pixels which may be controlled individually. However, these displays are very expensive. They have relatively low brightness due to the very process of pixel control (scanning) which limits the time during which a pixel can emit light." Para. [0007]). Topelberg uses its electrooptical material for illumination of

symbols on a picture card rather than for producing an image on the display itself as, for example, in the case of the matrix displays of the claimed invention. Therefore, one skilled in the art would have been taught away from the design of the claimed matrix displays in view of Topelberg and would not have found this invention to be obvious.

For these reasons Topelberg fails to disclose or make obvious preparing and lifting off at least one conducting electrode layer and a cholesteric dispersion layer from a release liner and then transferring these components to an active matrix backplane as the substrate (claim 80) for active matrix addressing of the display, or to a substrate that contains either row or column electrodes (claim 81) for passive matrix addressing of the display. Topelberg also does not disclose or suggest a display film including a stacked at least one conducting electrode layer and a cholesteric dispersion layer prepared on a release liner, lifting off from the release liner and then transferring this to a photovoltaic substrate so that the display can be optically addressed (claim 79). For the above reasons, the claimed invention of claims 79-81 is not disclosed by or obvious in view of Topelberg.

Topelberg does not disclose or make obvious the features of claim 60. Topelberg does not disclose a display film comprising a stacked sequence of layers prepared on a release liner and lifted off as a freestanding film or for transfer to a substrate. Topelberg does not disclose that the layers that are coated, printed or laminated on the release liner are in the sequence of a casting layer, lower conducting electrode, dispersion layer of liquid crystal dispersed in polymer and upper conducting electrode, the display film being operable as an electrically addressable display when connected to drive electronic circuitry. Topelberg may move around certain layers such as the picture card layer and an electrode layer, but nowhere discloses coating, printing or laminating layers on a release liner in sequence of a casting layer for building up the other layers of the display, lower conducting electrode, dispersion layer of liquid crystal dispersed in polymer and upper conducting electrode, and then lifting off these components from the release liner as a freestanding film or then transferring them to a substrate as claimed.

Topelberg also does not disclose the inventions claimed in the dependent claims. Topelberg does not disclose a casting layer on which other layers of the display film are prepared (claim 2); preparing on and lifting from a release liner a casting layer, first electrically conductive layer, dispersion layer and second conducting electrode (claim 3); at least one of first and second electrically conducting layers comprises a transparent electrical conductor (claim 62) formed of a conducting polymer or carbon nanotube material (claims 4 and 63); a dispersion layer that comprises at least one of an emulsion, phase separation and microencapsulated liquid crystal material (claims 9 and 46); light absorbing layer located between a casting layer and the dispersion layer (claim 13); a clear protective layer located over the second electrically conducting layer to ruggedize the transfer display film (claims 15, 48 and 68); a protective layer over the upper electrode layer (claim 67); an outer adhesive layer (claims 18 and 36); bistable cholesteric liquid crystal reflective of visible or infrared electromagnetic radiation (claims 19, 51 and 75); at least one additional dispersion layer (claim 55); a transparent electrically conductive layer located between adjacent

dispersion layers (claims 21, 52 and 56); a dispersion layer comprising left and right hand twist cholesteric materials (claims 22, 23, 76 and 77); dispersion layers reflective of red, blue and green light (claims 24, 53 and 74); a dispersion layer patterned with red, green and blue pixels (claim 25); a solar panel substrate (claims 27, 78 and claim 79); a substrate that comprises a photoconductive sheet and first electrically conductive layer for optically addressing the display (claim 28); the substrate comprising one of the electrically conductive layers (claim 32); a protective layer and particular arrangement of the film layers (claims 57-59); insulation layers (claims 64 and 65); optical layer (claim 66); a casting layer coated, printed or laminated over an adhesive layer (claim 69); optically opaque protective layer (claim 71); and preparation layer, adhesive layer or adhesive overcoat (claim 72).

The deficiencies of Topelberg are not remedied by the other references identified in the Information Disclosure Statement submitted with the last amendment.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. KENT-36969US2.

Respectfully submitted,

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Date: January 14, 2010